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Rediscovering and conserving orchids in a tropical city-state

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As a city-state, Singapore presents a unique set of challenges and opportunities for biodiversity conservation. While its landscape has undergone significant ecological changes since the 1800s due to agricultural expansion and urbanisation, a concerted effort to conserve the remaining natural habitat has continued to provide important refugia for native and rare plant species. The Orchidaceae, as Singapore's largest plant family and taxonomic group with proneness to extinction due to its largely epiphytic lifeform, constitutes a particularly compelling case study for understanding how cities can support the persistence of native plants. Orchid research in Singapore dates back to the late 19th century and is rooted in the history and identity of the Singapore Botanic Gardens, with former directors of the Gardens having undertaken extensive botanical explorations to enumerate and describe the orchid diversity of Singapore and the region. Today, the Gardens continues to build upon this foundation by investing in comprehensive floristic surveys, taxonomic research, and genomic studies. These have yielded much success in terms of rediscovering many native orchid species thought to be locally extinct, discovering new records, and even describing species new to science. Species recovery efforts have also been an area of priority, in endeavouring to re-establish and augment the populations of Singapore's rare and endangered native orchids. This presentation will follow the Gardens' journey through the last decade in advancing field surveys, systematic research, and *ex situ* conservation to conserve Singapore's native orchids. Singapore's case study provides conservation optimism and underscores the importance of continual investments in botanical fieldwork, research, and expertise.

Keywords: species rediscoveries, new species records, field surveys, systematic research, species recovery, Singapore Botanic Gardens